EVALUATION REPORT
SHORE TERMINALS-SELBY
Application #5850 - Plant #7034

2801 Waterfront Road
Martinez, CA 94553

I. BACKGROUND

Shore Terminal - Martinez has applied for an Authority to Construct/Permit to Operate for the following equipment:

S-76 Storage Tank # 11041, fixed roof tank in combination with an internal floating roof, 126 ft Dia., 100,000 barrel capacity.
S-77 Storage Tank # 11042, fixed roof tank in combination with an internal floating roof, 126 ft Dia., 100,000 barrel capacity.
S-78 Storage Tank # 11043, fixed roof tank in combination with an internal floating roof, 126 ft Dia., 100,000 barrel capacity.

These tanks will store gasoline and other petroleum products, which will be transferred to and from existing pipelines. These tanks will not be connected to the truck loading rack, so there will not be any increases from the up stream or down stream sources.

II. EMISSION INCREASES

The tanks will have mechanical shoes as primary seal and rim-mounted as the secondary seal. The floating roof deck will be cable supported with a single, center column and there are no adjustable leg fittings for this deck to minimize the emissions during tank degassing. The emissions from these tanks are calculated by EPA Tank 4.0 program using gasoline with Reid Vapor Pressure of 11. (See attached calculations)

Tank Emissions (EPA Tank 4.0):
Throughput = 4,200,000 gal X 25 times/yr = 105,000,000 gal/yr for each tank

	Annual (lb/yr)	Daily (day/yr)	
Rim loss	591.21	1.62	(365 day/yr)
Working loss	159.79	6.39	(25 time/yr)
Deck fitting loss	580.81	1.59	(365 day/yr)
Maximum emissions	1332	9.60	

Fugitive Component Emissions:
Implementation Guidelines for estimating mass Emissions of Fugitive Hydrocarbon Leaks at Facilities – February 1999". The emissions factors are contained in Table IV-1b, " 1995 EPA Protocol Marketing Terminal Average Emission Factors".

Fugitive sources	Number	Emission Factor kg/hr/source	Annual Emissions lbs/yr
Valves – light liquid	109	4.3 X 10-5	90.27
Connectors, Flanges–liq.	31	8.0 X 10-6	4.78
Total			95.05

Total Emissions = (1332 X 3) + 95 = 4091 lb/yr or 2.046 tpy

III. TOXIC SCREENING ANALYSIS

Sources S-76, S-77 and S-78 required the health risk screening analysis because benzene emissions from three sources exceeded the toxic trigger level assuming the average benzene

concentration in the gasoline is at 1.8 % by weight. (See attached vapor % and emission calculation)

Toxic Pollutant	Emission Rate for three tanks	Trigger Level
Benzene	6.5 X 3 = 19.5 lb/yr	6.7 lb/yr

The cancer risk to the maximally exposed industrial receptor is 0.1 in a million. Thus, in accordance with the risk management policy the screen passes since the sources comply with TBACT standards. (See attached toxic report dated 10/16/02)

IV. BEST AVAILABLE CONTROL TECHNOLOGY

BACT is not triggered for this application because VOC emissions from each source S-76, or S-77, or S-78 are less than 10 lb/day. Shore Terminals will also be conditioned to load a maximum 4.2 million gallons of gasoline per day to keep the emission less than 10 lb/highest day.

V. OFFSETS

Offsets are required for source S-76, S-77 and S-78 because the potential to emit from this facility is greater than 50 ton/yr. Shore Terminal – Martinez will provide offsets at a ratio of 1.15:1 for this application.

Offsets: 2.046 tpy X 1.15 = 2.352 tpy for this application
Shore Terminals – Martinez had submitted the company's Banking Certificate of Deposit # 652 to provide offsets for this project.

Banking Certificate of Deposit # 652 currently has 10.802 tpy POC and 11.352 tpy NO_2. Thus, the Banking Certificate will be reissued to Shore Terminal in the amount of 8.450 tpy POC and 11.352 tpy NO_2.

POC = 10.802 tpy – 2.352 tpy = 8.450 tpy

VI. PLANT CUMULATIVE INCREASE SINCE 4/5/1991

	Current Ton/yr	New Ton/yr	New Total Lbs/yr	New Total Tons/yr
POC =	0.00	2.046	0.00	0.00
NO_x =	0.00	0.00	0.00	0.00
SO_2 =	0.00	0.00	0.00	0.00
CO =	0.00	0.00	0.00	0.00
NPOC =	0.00	0.00	0.00	0.00
TSP =	0.00	0.00	0.00	0.00
PM_{10} =	0.00	0.00	0.00	0.00

VII. STATEMENT OF COMPLIANCE

This application is subject and expected to comply with Regulation 8, Rule 5-304.2 and 304.3, which requires that storage tanks larger than 39 thousand gallons be equipped with an internal floating roof with primary and secondary seals specified in Regulation 8-5-321 and 322.

Sources S-76, S-77 and S-78 are subject and expected to comply with Regulation 10 - Standard of Performance for New Stationary, 40 CFR 60, Subpart Kb – Volatile Organic Liquid Storage Vessels – for a fixed roof tank in combination with an internal floating roof.

This project is considered to be ministerial under the District's CEQA Regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors in accordance with Permit Handbook Chapter 4.1.

This project is over 1,000 ft from the nearest public school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

BACT, PSD, NESHAPS are not triggered.

VIII. CONDITIONS

Condition for Sources S-76, S-77 and S-78, fixed roof tanks in combination with internal floating roofs, Application # 5850, Plant # 7034 Shore Terminals-Martinez.

1. The gasoline or other hydrocarbon liquids loaded into each storage tank (S-76, or S-77, or S-78) shall not exceed 105 million gallons in any consecutive 12 month period. [Basis: Cumulative Increase]

2. The gasoline or other hydrocarbon liquids loaded into each storage tank (S-76, or S-77, or S-78) shall not exceed 4.2 million gallons during any calendar day. [Basis: Avoid Best Available Control Technology]

3. The average benzene concentration in all hydrocarbon liquids stored in Storage Tanks S-76, S-77 and S-78 shall not exceed 1.8 % by weight. The owner/operator of sources S-76, S-77 and S-78 shall analyze all materials stored in each of these tanks for benzene concentration at least once every 6 months. Each tank shall be sampled within 30 days of start-up. If the owner/operator can demonstrate that several tanks contain hydrocarbon from a single source (shipment), then a single benzene analysis may be performed for that group of tanks. These records shall be kept on file for at least 5 years after the date of entry and shall be made available to District personnel upon request. All tests shall be performed in accordance with District approved laboratory procedures. . [Basis: Cumulative Increase]

4. All new valves and flanges associated with this project shall be subject to the inspection and maintenance criteria of District Regulation 8-18 and any future revisions to this rule. [Basis: Reg. 8-18]

5. Sources S-76, S-77 and S-78 shall meet all applicable requirements of District Regulation 8-5 and NSPS, 40 CFR 60, Subpart Kb. [Basis: Reg. 8-5, NSPS]

6. In order to demonstrate compliance with the above conditions, the owner/operator of tanks S-76, S-7, and S-78 shall maintain the following records in a District approved log. These records shall be kept on site and made available for District inspection for a period of five years from the date that the record was made. [Basis: Record keeping]
   a. The type and VOC content of all materials stored and the dates that the materials were stored.
   b. The total daily throughput of each material stored, summarized on a monthly and annual basis.

IX. RECOMMENDATION

It is recommended that conditional Authority to Constructs be granted to Shore Terminal - Martinez for the following equipment:

S-76 Storage Tank # 11041, fixed roof tank in combination with an internal floating roof, 126 ft Dia., 100,000 barrel capacity.

S-77 Storage Tank # 11042, fixed roof tank in combination with an internal floating roof, 126 ft Dia., 100,000 barrel capacity.

S-78 Storage Tank # 11043, fixed roof tank in combination with an internal floating roof, 126 ft Dia., 100,000 barrel capacity.

Thu H. Bui
Air Quality Engineer II
Permit Services Division

Date: _____

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